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REMARKS

Claims 1-12 and 18-33 are currently pending in the above application. Claims 13-17 and 33-42 are withdrawn from consideration as being drawn to a non-elected invention. Claims 43 and 44 are added by the foregoing amendment.

Claims 18-32 stand objected to for use of the term "optional" in "optional tertiary mirror" (specifically found in claims 1, 18 and 30) and for use of the term "optional" in "optional front grapple fixture" (claim 24) and "optional rear grapple fixture" (claim 28). Applicant respectfully traverses the Examiner's objection. However, in an effort to move this case towards allowance, Applicant has removed reference to an optional tertiary mirror in claims 1 and 18, and instead included them in new claims 43-44, respectively. Also, Applicant has removed "optional" from claim 30 with respect to the tertiary mirror. Further, Applicant has removed the term "optional" from claims 2, 24, 27 and 28 with respect to front grapple feature, guide and rear grapple feature. Reconsideration of claims 1-12 and 18-32 and consideration of claims 43-44 in light of these changes is thus respectfully requested.

Applicant has also made clarifying amendments to independent claims 1 and 18 to indicate that the modular mirror backing is formed by interlocking at least two of the interlocking modular segments.

Claims 1-4, 6-12, 18-20, 22, and 24-32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hugenell (U.S. Patent No. 5,157,556). Applicant respectfully traverses the Examiner's rejection.

Hugenell discloses a primary reflector for a reflector telescope having a plurality of individual polygonal reflecting elements (1 to 11) and positioning and adjusting elements 12 connected thereto. An individual hexagonal reflector support platform 13 located on an

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individual support plate 16 is shown having a total of six support and adjustment elements 12.

Hugenell does not teach, however, a modular mirror backing structure formed from interlocking at least two of a plurality of interlocking mirror backing structure segments as required in independent claims 1 and 18. (Emphasis Added) Statements made by the Examiner in the first full paragraph of Page 5 of the Office Action, starting with "Regarding claims 3 and 20", incorrectly state that Hugenell teaches this point. What Hugenell shown in Figures 1, 3 and 4 is a plurality of mirror segmented optics 1-11 abutting one another, wherein each individual segmented optic 1-11 is coupled to an individual support platform 13 which in turn is coupled to an individual support plate 16. Nowhere in the Figures is shown any interlocking between adjacent support plates 16 as is required in independent claims 1 and 18. As such, each segmented optic in Hugenell is only abutted together, not interlocked and abutted through the underlying modular mirror backing system, as in claims 1 and 18. As such, Hugenell does not teach the present invention as in claims 1-4, 6-12, 18-20, 22, and 24-29 and in new claims 43-44. Reconsideration of claims 1-4, 6-12, 18-20, 22, and 24-29 and consideration of claims 43-44 is thus respectfully requested.

Further, with regards to claims 2, 3, 24 and 28, Applicant has removed the term "optional" regarding the front grapple fixture, the guide and the rear grapple fixture. Hugenell does not teach or disclose a front grapple fixture, a guide, and a rear grapple fixture. As such, for these additional reasons, Hugenell does not teach what is disclosed in claims 2, 3, 24 and 28. Further reconsideration of these claims is respectfully requested.

Also, with regards to claims 30-32 and with respect to new claims 43-44, Hugenell does not teach or disclose a tertiary mirror contained within said central hole and coupled with said optical beam path. As such, claims 30-32 and new claims 43-44 are novel over Hugenell. Reconsideration of claims 30-32 and consideration of new claims 43-44 is thus respectfully requested.

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Claims 5, 21, and 33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hugenell (U.S. Patent No. 5,157,556) in view of Callender (U.S. Invention Registration H783). Applicant respectfully traverses the Examiner's rejection.

First, claim 33 is listed in the first full paragraph on Page 2 of the Office Action as being a claim that will not be examined. Thus, Applicant is unclear as to whether the rejection to the combination of prior art references is correct or whether the rejection to the claim should be withdrawn. Clarification is thus respectfully requested.

As the Examiner indicates, Callender teaches a Cassegrain telescope having a primary mirror that collects light from a distant secondary mirror. The primary mirror is supported by a primary mirror structure. The secondary mirror is attached to and supported in position by a one-piece conical (honeycomb) support member that is secured to and positioned by the primary mirror structure.

Similarly to Hugenell, Callender does not teach a modular mirror backing structure formed from interlocking at least two of a plurality of interlocking mirror backing structure segments as required in independent claims 1 and 18, and hence dependent claims 5 and 21. Thus, the combination of Hugenell and Callender does not teach these what is disclosed in claims 5 and 21. Reconsideration of claims 5 and 21 is thus respectfully requested.

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The Applicant submits that claims 1-12, 18-32 and 43-44 are allowable over the prior art and request that the Examiner moves this case towards allowance. The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 223-9500 if any unresolved matters remain.

Respectfully submitted,

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